

**WSET DIPLOMA, UNIT 7-THESIS.  
BRETTANOMYCES IN WINE, A FAULT OR NOT?**

**ABSTRACT**

**Motivation for choosing the subject**

Brettanomyces in wine is a topical problem nowadays because of its obscure nature, the rapid spread throughout the wine world and various opinions on this subject. Generally speaking, nowadays there are three major groups of wine experts who have ever dealt with Brettanomyces. The first group believes that Brettanomyces in wine is a fault, in any concentration. The second group thinks that Brettanomyces in low concentration adds some complexity to the wine. The third group considers Brettanomyces to be an expression of terroir and part of nature. Needless to say, that there are also a lot of wine lovers who have no idea what Brettanomyces is. Who is right and who is wrong?

**Objective of the Thesis**

The objective of this thesis is to explore the nature of Brettanomyces, its affection on wines, discuss some problematic issues, to answer the major question of whether it is a fault, terroir or a complexing agent and some sub-questions: what is it?; do we really consume “clean” and qualitative wines which are described as complex wines?; are we fooled by some sly winemakers in terms of Brettanomyces?; how fast is Brettanomyces spreading through the wine world?.

**Methodology**

An extensive research into microbiological wine phenomenon, Brettanomyces, as well as an analysis of wine experts’ opinions was carried out. A lot of wine literature was scrutinized in an attempt to summarize all the information available and to answer the stated questions analyzing the data. Different sources were used such as wine books by Bird, D., Goode, J., Margalit, Y., Peynaud, E., Robinson, J.; articles in wine journals and magazines-Wine Internet Technical Journal (vinidea.net), Journal of the Science of Food and Agriculture, American Journal of Enology and Viticulture, Internet Journal of Enology and Viticulture (www.infowine.com), Journal International des Sciences de la Vigne et du Vin, Food Chemistry, Decanter, written by highly competent authors such as Arvik, T., Chatonnet, P., Dubourdieu, D., Coulon, J., Lucy Joseph, Bisson, Renouf L.F., Suarez, R., and many others; websites - www.infowine.com, www.oeno-one.eu, www.oiv.int. Furthermore, a practical blind tasting experiment was carried out with wines affected by Brettanomyces to see how different people react to its by-products (4-ethylphenol and 4-ethylguaiacol) and to define if people are

able to tell good quality wines from faulty ones. A mini questionnaire, considering tasters' wine experience (ranging from highly experienced to less experienced people) was devised.

### **Content**

The Thesis starts with the **Introduction** where the objective for writing the paper along with motivation for choosing the subject is stated. Reasons why the chosen subject is topical nowadays are defined. The problem of Brettanomyces is raised and a description of the applied methods is given. In the main body of the Thesis there are four sections falling into sub-sections. **Section "The Nature of Brettanomyces"** describes historical background of Brettanomyces, what Brettanomyces is, where Brettanomyces is found, different forms-Brettanomyces/Dekkera, suitable environment for Brettanomyces to flourish, key by-products of Brettanomyces, ways of defining the presence of Brettanomyces in wine. **Section "Affection of Brettanomyces on Wines"** describes ways of contaminating wine, how Brettanomyces acts, what Brettanomyces adds to wine, olfactory and organoleptic effects of Brettanomyces on wine (positive and negative), the issue of adding complexity to the wine, a perception threshold of defects in wine affected by Brettanomyces. **Section "Problematic Issues with Brettanomyces"** describes how common Brettanomyces is, methods of prevention/controlling/monitoring Brettanomyces, different opinions on Brettanomyces. The author states the fact that there is a lack of knowledge about Brettanomyces and poses the question of peoples' palates being spoiled. **Section "A Practical Tasting Experiment of the Brettanomyces Perception"** describes a practical blind tasting experiment carried out to see how different people (winemakers from Russia, France and Italy, vinegrowers, a sommelier, wine lovers and laymen tasting blind 9 red wines) react to Brettanomyces wines (6 out of 9 with different concentration), namely to its by-products (4-ethylphenol and 4-ethylguaiacol) and to define if people are able to tell good wines from faulty ones, judging by their wine experience. In the **Conclusion** there is a summary of the Thesis and the research findings, speculations on quality in wine and some recommendations.

### **Conclusion**

The Thesis concludes that Brettanomyces is very dangerous; it is a fault but not terroir. Some winemakers are trying to mask their mistakes talking about the addition of complexity. We are probably fooled. Many experienced tasters are not able to recognize Brettanomyces and to tell good quality wines from faulty ones. The problem of Brettanomyces spreading is underestimated; it could be the next epidemic like phylloxera. It is spreading very fast through the wine world; many wine producing countries are already on alert.